Wave Streetcar Addendum No. 3 Memorandum, Issued 5/08/17

DATE: May 08, 2017

TO: District Contracts/ Final Plans

FROM: Robert Bostian, Project Manager

COPIES: File

SUBJECT: **Addendum Number** 3 - Letting (mo./yr.) 08/2017

Financial Project ID 421390-7-52-01 (Lead number only)

Proposal/ Contract ID ER484

Federal Funds: ☐No ☒Yes Federal Aid No. D417-019-B

County: Broward State Road No.

Concurred by: Robert Bostian Date: 5/9/2017
Signature of Alternate Contracting Coordinator (John Olson (primary)/Robert Bostian (alternate)) or Designee.

Legal Approval Date: Dawn Raduano 5/10/2017
(Dawn Raduano)

Central Office Approval Date: 5/3/2017
(State Construction Office – Suzannah Ray)

CONTRACT TIME REVISED: ☒No ☐Yes (If yes, _____ Calendar Days)

RFP, pg. iii, iv, and v

Attachments revised as follows:

M. Right-of-Way (ROW)
   1. Broward County Maintenance ROW ~~Map (NOT INCLUDED)~~Maps

S. Environmental Permits
   1. USCG SE 3rd Avenue Bridge Permit Application
   2. USACOE ~~Application~~Permit No. SAJ-2016-00936 NWP
   3. SFWMD ERP Permit No. 06-07447-P
   4. SFWMD Bridge Permit Application
   ~~4.~~5. Sovereign and Submerged Lands Easement ~~(NOT INCLUDED)~~ Permit No. 06-03761-L

GG. Access Management Plan

RFP, pg. vi

Reference Documents revised as follows:

1. **General**
   1.11. Inlet Capacity Analysis.pdf

5. Survey

5.9. Utility Surveys

5.9.5. Test Hole Data Matrix and Summary of Verified Utilities.pdf

RFP, Section II Schedule of Events

Revised as follows:

Table II-1: Schedule of Events

Date	Event
05/12~~04/10~~/2017	Deadline for submittal of questions, for which a response is assured, prior to the submission of the Technical Proposal. All questions shall be submitted to the Pre-Bid Q&A website by 5:00 pm local time.
05/19~~04/18~~/2017	Deadline for the Department to post responses to the Pre-Bid Q&A website for questions submitted by the Design-Build Firms prior to the submittal of the Technical Proposal by 5:00 pm local time.
06/05/~~01/~~2017	Technical Proposals due in District Four Office by 12:00 p.m. local time.
06/05/~~01/~~2017	Deadline for Design-Build Firm to "opt out" of Technical Proposal Page Turn meeting.
~~05/08~~06/27/2017	Technical Proposal Page Turn Meeting. Times will be assigned during the Pre-Proposal Meeting. 45 Minutes will be allotted for this Meeting.
07/~~11~~14/2017	Question and Answer Session. Times will be assigned during the pre-proposal meeting. One hour will be allotted for questions and responses.
07/~~17~~24/2017	Deadline for submittal of Written Clarification letter following Question and Answer Session 5:00 pm local time.

RFP, Section III.F. Question and Answer Session

Revised as follows:

One (1) week prior to the Price Proposal due date the Design-Build Firm shall submit to the Department a written statement as follows: "[insert name of the Design-Build Firm] confirms that, despite any provision in the Design-Build Firm's Technical Proposal or any Q&A written clarification letter that may be inconsistent with the other requirements of the Contract Documents, [insert name of the Design-Build Firm] intends to comply fully with the requirements otherwise provided for in the Contract Documents, except for, pursuant to ~~Section I – Order of Precedence – of the RFP~~ Subsection 5-2 Coordination of Contract Documents of the Design-Build Division I Specifications, any [insert name of Design-Build Firm]'s statements, terms, concepts or designs that can reasonably be ~~interrupted~~ interpreted as offers to provide higher quality items than otherwise required by the other Contract Documents or to perform services or meet standards in addition to or better than those otherwise required which such statements, terms, concepts and designs are the obligations of [insert name of the Design-Build Firm]."

RFP, Section V.B.1. Alternative Technical Concept (ATC) Proposals

Revised as follows:

- Streetcar tracking technology
- ~~Submarine~~Submerged conduit with cable or directional bore technology at New River
- Operational efficiency

RFP, Section V.E. Environmental Permits

Revised as follows:

Army Corp of Engineers: Engineering Form No. OMB #0710-003 (~~pending~~approved)
South Florida Water Management District: Environmental Resource Permit No. 16-1114-10 (approved)
US Coast Guard: SE 3rd Avenue Bridge Permit (pending)
Sovereign and Submerged Lands Easement Permit No. 06-03761-L (~~pending~~approved)
SFWMD: Bridge Permit (pending)

RFP, Section V.E.3. Vehicle Maintenance and Storage Facility

Revised as follows:

The geophysical survey indicated that two anomalies were located on the property. The first was located approximately 30 feet south of the building. The second was a possible vault located approximately 40 feet east of the southeast corner of the building. ~~The Department will conduct exploratory excavations in the area of both anomalies and remove identified tanks or structures that may be found in association with the known anomalies.~~The Department has removed these anomalies. The Department has removed and disposed of the existing building on the property.

The Design-Build Firm is required to comply with RFP Attachment W.1. Combined Soil Remedial Action Plan, Soil Management Plan, and general Dewatering Plan. Refer to RFP Section VI.N for additional information and requirements.

RFP, Section V.X. Adjoining Construction Projects

Revised as follows:

- New Private Developments (site plan approval requested or recently approved)
  - 524 S Andrews ~~Ave~~Avenue
  - 300 N Andrews Avenue
  - 500 N Andrews Avenue
  - 100 E Las Olas Boulevard
  - 200 E Las Olas Boulevard
  - 4 W Las Olas Boulevard
  - 315 SW 1st Avenue

- 330 SW 1st Avenue
- 120 NE 4th Street
- 401 NW 1st Avenue
- 400 NE 3rd Avenue
- 400401 NE 3rd Avenue
- 501 NE 3rd Avenue
- 103 NE 6th Street

- City of Fort Lauderdale Fire Station #8 (1717 SW 1st Ave)
- Broward County Judicial Center Improvements (100 SE 6th Street)
- City of Fort Lauderdale Streetscape Improvements (SE 6th Street)
- Roadway Improvements on SE 3rd Avenue from SE 17th Street to SE 6th Street
- City Park Garage Improvements (SE 2nd Street)
- Roadway Improvements on Broward Blvd

~~New Private Development on south side of NE 4th Street~~
~~New Private Development on NE quadrant of NE 3rd Ave and NE 4th St~~

- Drawbridge Rehabilitation at Andrews Avenue

RFP, Section V.DD. Right of Way Furnished by the Department

Revised as follows:

Table V.DD.-1 ROW Acquisitions

Area I.D.	Reason for Acquisition/ Easement	Anticipated ROW Clear Date
1	Parcel 100	J~~uly~~October 2019
2	Parcel 101	J~~uly~~October 2019
3	Parcel 102	J~~uly~~October 2019

RFP, Section VI.D. Utility Coordination and Design

Revised as follows:

The Design-Build Firm is responsible for all public and private utility connection fees and all costs to provide for new or relocated ~~services~~service connections, e.g. electrical power service to traction power substations.

The following Utility Agency/ Owners (UA/O's), in Table VI.D-1 and VI.D-2, have been identified by the Department as having facilities within the Project corridor which Department contemplates an adjustment, protection, or relocation is possible. Where necessary, public utilities shall be relocated and included in the Design-Build Firm's scope of work. The Design-Build Firm shall be responsible for performing all necessary public utility relocation work, and Protection of Public utilities, regardless of circumstances. Private utility relocations are not eligible for reimbursement by the Department and are not part of the Design-Build Firm's relocation requirements except for all utility relocation fees or new or relocated service point fees and as noted below.

RFP, Section VI.D.3. Utility Plans – Sanitary Sewer

Revised as follows:

The City of Fort Lauderdale has recently repaired and/or lined portions of the sewer system within the Project limits that contribute flows to Pump Station No. ~~7.~~7 (within the alignment, north of the river). No manholes within this area have been rehabilitated or modified, and any impacts to sanitary sewer manholes will be the responsibility of the Design-Build Firm.

The Design-Build Firm shall install cured in place pipe (CIPP) lining designed for the full deterioration of the host pipe of the existing gravity sanitary sewers, from manhole to manhole, within the zone of influence of the streetcar track south of the New River.

RFP, Section VI.E.2.a. Roadway Design

Revised as follows:

All existing brick paver and associated concrete banding ~~or stamped asphalt intersections and crosswalks~~ shall be removed and replaced with full depth asphaltic concrete. All existing stamped asphalt intersections and crosswalks shall be restored to its pre-construction pattern and colors. All existing painted intersections on Las Olas Blvd and from SE 1st ~~Ave~~Avenue to SE 3rd ~~Ave~~Avenue shall be replaced with stamped ~~full depth~~ asphaltic concrete.

RFP, Section VI.E.2.a. Roadway Design

Revised as follows:

The reinforced concrete track slab must provide an unsupported fully loaded (dead load + live load) span length of 8 feet in the event of subgrade failure due to an instantaneous subsurface collapse caused by an unexpected underground utility rupture.

RFP, Section VI.F. Geometric Design

Revised as follows:

The existing raised median along South Andrews Avenue, and NE 6th Street, will need to be retained. Modifications to the existing raised median will be required for the safe operation of the Streetcar. The Design-Build Firm shall incorporate the approved RFP Attachment GG, Access Management Plan, into the final design. A new raised median/ separator will need to be added along Brickell Avenue, between Broward Boulevard and NW 2nd Street, and along South Andrews Avenue between S 9th Street and S 6th Street.

RFP, Section VI.H.5. Bridge Design Analysis

Revised as follows:

18. The Design-Build Firm is responsible for Bridge Operation and Maintenance. See RFP Attachment F, Technical Requirements for ~~3rd Avenue~~ Bridge Construction, for details.
19. Provide Maintenance Manuals and Training in accordance with RFP Attachment F, Technical Requirements for ~~3rd Avenue~~ Bridge Construction.
20. The Design-Build Firm shall be responsible for performing all operation and maintenance activities on the SE 3rd Avenue Bridge once mobilization for construction begins on Construction Segments 2 or 2A or on January 7, 2019, whichever comes first, and shall continue until Final Acceptance by the Department. The Design-Build Firm and Broward County Bridge staff shall perform a pre-construction survey of all assets and agree on the documentation of condition at this time. The Design-Build Firm and Broward County Bridge staff shall perform a post-construction survey and agree on items that need attention. This survey shall be conducted far enough in advance of Final Acceptance to address all necessary deficiencies to the satisfaction of the County.

RFP, Section VI.I. Specifications

Revised as follows:

The Design-Build Firm is responsible for preparing the Construction Specification Package, which will consist of all work elements on the Project, including:

- The Design-Build Firm shall use the provisions included in the RFP Attachment F, Technical Requirements for ~~3rd Avenue~~ Bridge Construction, as minimum requirements to be included in the Construction Specification Package prepared by the Design-Build Firm.

RFP, Section VI.M.3.a. Traffic Control Requirements

Revised as follows:

1) General Requirements

(mm) The areas beneath the SE 3rd Avenue Bridge approach spans shall accommodate all existing parking spaces for the entire duration of the project except during the retrofit of the SE 3rd Avenue Bridge (Segments 2a and 2b construction). The location of the new train control bungalow shall be coordinated with the Department to minimize impacts to the existing parking;

4) Long Term Lane Closures (LTLC)

(a) Design-Build Firm must maintain access to East Courthouse Parking Garage and the Courthouse Drive during the LTLC for Segment 2; and
(b) Long Term Lane Closures permitted for intersection construction shall be performed between the hours of 10:00 PM Friday through 4:00 AM Monday~~; and~~.
~~The maximum allowable time for the complete Long Term Lane Closure for Segment 2A Bridge work is 140 Calendar days.~~

Table VI.M.3.-3: City Events

Event Name	Address/ Location	Event Limits	Construction Segment
January			
Annual Las Olas Art Fair Part 1	Las Olas Blvd	600 E Las Olas Blvd	3
Ice Skating Rink	Huizenga Plaza	Las Olas Blvd	3
March			
Annual Las Olas Art Fair Part 2	Las Olas Blvd	600 E Las Olas Blvd	3
April			
Corporate Run	Huizenga Plaza	SE 2nd St, S Andrews Ave, SE 3rd Ave, Las Olas Blvd,	12, 11, 10, 9, 5, 3, 2, 1
Riverwalk Run	Huizenga Plaza	Las Olas Blvd, SE 3rd Ave, N New River Drive, SE 6th St	3, 2
November			
Ice Skating Rink	Huizenga Plaza	Las Olas Blvd	3
Winerfest Family Fun Day	Huizenga Plaza	Las Olas Blvd	3
December			
Ice Skating Rink	Huizenga Plaza	Las Olas Blvd	3

RFP, Section VI.N. Environmental Services/ Permits/ Mitigation

Revised as follows:

The following Contamination Screening Evaluation Reports (CSER) are included in ~~Reference Document 7~~RFP Attachment X.

~~Contamination Screening Evaluation Report Wave Streetcar, dated 2008.~~

- Updated Contamination Screening Evaluation Report Wave Streetcar, dated August 2, 2016.

Based on the above report, Level II Contamination Impact Assessments were performed by the Department along the Project corridor to determine the potential for construction impacts associated with Project construction. The details of the assessment activities, including Project information updates, are found in the following documents, included in RFP Attachments W and ~~Reference Documents 7~~RFP Attachments X.

- Site Assessment Report, dated April 30, 2016.
- Level II Screening Report, ~~[In Progress].~~dated November 17, 2016.
- Summary of Environmental Activities Report (SEAR) [In Progress].

Based on the above reports and Project conceptual plans, contamination has been identified in the following areas:

- Proposed VMSF (former FEC railway facility) located at 1801 SW 1st Avenue. The contaminants of concerns and specific locations of contamination is provided within the

SEAR. Further discussion of the VMSF is provided in Subsection V.E.3 of this RFP.

- ~~Additional contaminated sites have been identified within the Project corridor; however, further investigations are pending.~~

RFP, Section VI.N.3. Contaminated Groundwater Management

Revised as follows:

The Design-Build Firm shall provide a minimum of 90-days notification to the FDOT Project Engineer when approaching the areas noted in the Level II ~~Contamination Assessment~~Screening Report ~~prepared Kimley-Horn and Associates, Inc.,~~ as provided in ~~Reference Document 7~~RFP Attachment X.2.

RFP, Section VI.N.5. Asbestos Containing Materials

Revised as follows:

A Limited Asbestos Building Survey and Analytical Report was completed to determine the location of asbestos containing materials (ACM) on the Project Bridge located on the SE 3rd Avenue Bridge over the New River. The existing operating machinery brake pads and control house wall heater insulation have been tested and found to include friable asbestos containing materials as defined by the Environmental Protection Agency. The bearing pads supporting the existing approach span prestressed beams are identified as containing asbestos, but have not been tested to determine whether this material is friable asbestos containing material. The location of the identified ACM, as well as other pertinent information, is found in the Limited Asbestos Building Survey & Analytical Report dated November 3, 2015 for the Project in Reference Document ~~7~~6. ACM was found in the Break Pad and Wall Heater Insulation.

1. The Design-Build Firm's attention is directed to the fact that additional suspect ACM could be present in one or more of the structural elements of the bridge that were inaccessible during the documented the Limited Asbestos ~~Material Testing~~Building Survey and Analytical Report dated ~~October~~November 2015.

RFP, Section VI.N.6. Lead Based Paint

Revised as follows:

The Lead-Based Paint Component Testing Report for the bridge is found in Reference Document ~~3~~6.

The report did not have a TCLP analysis; therefore, the bridge was sampled using the TCLP procedure in order to determine the appropriate disposal. The final Lead Based Paint Survey is found in Reference Document ~~3~~6.

RFP, Section VI.N.8. Vehicle Maintenance and Storage Facility

Revised as follows:

A geophysical survey was conducted as part of the SAR and indicated several subsurface anomalies were located on the property. ~~The Department will conduct exploratory excavations in the areas of these anomalies and remove any identified tanks or structures that may be found in association with the known~~The Department has removed these anomalies.

The PPD SAR approval letter stipulated that four (4) quarters of groundwater monitoring would be necessary prior to a No Further Action with Controls (NFAC) Proposal. Therefore, a Groundwater Monitoring Plan was submitted to PPD on July 25, 2016 and subsequently approved on July 28, 2016. ~~Groundwater monitoring is currently ongoing at the VMSF site. Upon successful completion of groundwater monitoring, a NFAC Proposal will be submitted to PPD.~~Groundwater monitoring reports dated October 3, 2016, November 11, 2016, and January 16, 2017 were provided to Broward County. The January 16, 2017 report also contained a request for NFAC. Broward County provided provisional approval of the NFAC in a letter dated January 24, 2017..

RFP, Section VI.Q.1. Signalization Plans/ General

Revised as follows:

Table VI.Q.-1: Traffic Signal Improvement Summary

Location	Intersection Location	Classification*	Joint Use Traffic Signal/ OCS Poles Requested
8	S Andrews Avenue - S 11th Street	~~New~~No Signal	~~Yes~~N/A

RFP, Section VII.B. Submittal Requirements

Revised as follows:

2. Section 2: Plans and Technical Special Provisions

   c) The Plans shall complement the Project Approach.

      1) The Proposal plans shall clearly reflect the Design-Build Firm's design approach for each component.
      2) The Plans shall include at a minimum Track, Station Platforms, Train Control, OCS, Communications, Site Civil, Architecture, structure, ~~Fire Protection,~~ Plumbing, HVAC, Electrical, Systems (Low-Voltage special systems), Traction Power Distribution Systems, and Traction Power Substation.

RFP Attachment B, Division I Specifications for Design-Build Contracts

Revised as follows:

Updated Division I incorporated.

RFP Attachment D, Typical Section Package

Revised as follows:

Typical Section – NE 6th Street sheet updated

RFP Attachment E, SE 3rd Avenue Bridge Rehabilitation Criteria

Revised as follows:

Updated Table of Contents.

RFP Attachment F, Technical Requirements for Bridge Construction, Section 466.1.2 Requirements

Revised as follows:

Provide qualified personnel to perform bridge tending services, 24 hours per day, at any time the movable span is operable ~~for~~as defined in the ~~duration of the contract~~RFP.

RFP Attachment F, Technical Requirements for Bridge Construction, Section 466.2 Preventative Maintenance During Construction

Assume the responsibility for all maintenance on the SE 3rd Avenue Bridge ~~from~~as defined in the ~~first chargeable workday through final acceptance~~RFP, including all aspects of bridge administration, maintenance, repairs and operation.

RFP Attachment F, Technical Requirements for Bridge Construction, Section 508.2.1.2 Spare Parts

~~List of all manufacturers' recommended spare parts.~~N/A

RFP Attachment F, Technical Requirements for Bridge Construction, Section 508.3.9.2 Materials

Furnish keyed alike locks and directory frame and card with transparent cover on each door. Provide two keys per ~~paneboard~~panelboard lock.

RFP Attachment F, Technical Requirements for Bridge Construction, Section 508.7.2.4 Programmable Logic Controller

R. Provide ~~two (2~~one (1) laptop PCs, each system with all required software (including any hardware "keys") and hardware to allow the programming and troubleshooting of the PLC. Provide, at a minimum, the following features:

7. Windows ~~8.1~~10 64 bits with full compatibility with PLC programming software.

RFP Attachment G, Transit Criteria, Revision Record

Revised as follows:

REV. DATE	REV. NO.	SECTIONS AFFECTED	COMMENTS
~~09/21/16~~02/13/17	0	All Sections	Initial Issue ~~(DRAFT)~~
03/28/17	1	Sections 1.3, 4.3, 5, 7, 8, 9, and 10.	Addendum 1
05/03/17	2	Sections 4, 5, 7, and 8.	Addendum 3

RFP Attachment G, Transit Criteria, Section 4.2.4 Yard Track Layout

Revised as follows:

The Design-Build Firm shall ~~be responsible to design and construct~~avoid any modifications or impacts to the existing pump station and its appurtenances located on 18th Court resulting from the construction of the loop track.

Updated Figure 4-1: Site Layout

RFP Attachment G, Transit Criteria, Section 4.3.16 Maintenance

Revised as follows:

The following shall be provided at the Maintenance Shop area:

A. General (Ground Level and Mezzanine Level):

4. General receptacles at 30 ft. interval. One receptacle~~.~~ on wall greater than 10 ft between openings.
5. Mezzanine Level and Upper Level Work Platform safety railing requirements are specific to the use of a Safety Platform and allow open access to the top of the Streetcar vehicle without railings at the edge of the platform. Other safety railing and safety end gates are still required and ~~should~~ shall be coordinated with ~~both~~ the RFP Attachment BB VMSF Concept of Operations ~~document detailed description and the with the Concept Design~~.

RFP Attachment G, Transit Criteria, Section 4.3.18.1. Intrusion Detection

Revised as follows:

Alarms shall annunciate locally through a horn/ strobe, and shall ~~also~~ annunciate at the Security Console (location is TBD as coordinated with Broward County~~.~~) and the OCC Room.

RFP Attachment G, Transit Criteria, Section 4.3.18.2. Access Control System (ACS)

Revised as follows:

4.3.18.2 ACCESS CONTROL SYSTEM (ACS)

RFP Attachment G, Transit Criteria, Section 4.3.24 VMSF Shop Layout Guidlines

Revised as follows:

The Space Needs Program provided in ~~the~~RFP Attachment BB, VMSF Concept of Operations ~~Report,~~ provides a detailed listing of all areas to be included in the VMSF.

- Reference the RFP Attachment BB, VMSF Concept of Operations ~~Report,~~ for a comprehensive listing of all spaces and functional requirements.

RFP Attachment G, Transit Criteria, Section 4.3.25 Shop Functional Areas

Revised as follows:

Additional programmatic detail and functional diagrams are provided in the RFP Attachment BB, VMSF Concept of Operations ~~Report~~.

RFP Attachment G, Transit Criteria, Section 4.3.25.4.1 Electronics Repair Shop and Traction Power/ Train Control Shop

Revised as follows:

This shop shall ~~have~~ be a “clean environment shop” and shall include static dissipative floors and work surface workstations is minimum requirement.

RFP Attachment G, Transit Criteria, Section 4.3.25.8.3 Traction Sand Filling

Revised as follows:

Each vehicle is equipped with a sanding system to assist with traction and braking the vehicles when the tracks are wet or covered with materials such as ~~leafs~~leaves and grasses.

RFP Attachment G, Transit Criteria, Section 4.3.28 VMSF Industrial Equipment Requirements

Revised as follows:

Office, Administration, and Support areas shall be furnished per guidelines in the RFP Attachment BB, VMSF Concept of Operations.

RFP Attachment G, Transit Criteria, Section 4.3.28.3 Safety Equipment

Revised as follows:

For a comprehensive list of required equipment reference the RFP Attachment BB, VMSF Concept of Operations ~~Report~~.

RFP Attachment G, Transit Criteria, Section 4.3.28.5 Non-Revenue Vehicles

Revised as follows:

For a more detailed list of required non-revenue vehicles reference the RFP Attachment BB, VMSF Concept of Operations ~~Report~~.

RFP Attachment G, Transit Criteria, Section 5.1.1 General

Revised as follows:

The TPSS shall be sized based on computer simulation studies taking in consideration all the determining factors, such as track alignment, power distribution system electrical parameters, vehicle physical and performance parameters, vehicle propulsion~~, and~~ /auxiliary/OESS parameters, streetcar operational requirements, ~~among others.~~train signal and traffic signal stops, etc. Other configurations for the ~~TPSS'~~TPSS may be proposed subject to acceptance by the Department.

RFP Attachment G, Transit Criteria, Section 5.1.3 Substation Location, Rating, and Spacing

Revised as follows:

DC power supply for the VMSF shall be provided by a dedicated substation. It shall not be connected with the streetcar mainline power. VMSF Yard power shall be both rail and OCS isolated from the mainline; and the shop system shall be fully grounded. The VMSF substation shall be built in place, and located in an interior room within the maintenance facility. Therefore, no Outdoor enclosure is required.

The Design-Build Firm shall perform a computer-aided simulation to confirm the suitability of the substation ~~rating;~~ratings and TPSS locations (distance between substations) for providing acceptable OCS system ~~voltage, and~~voltages, rail to earth ~~voltage limits.~~voltages, feeder circuit amperages and temperatures, OCS conductor amperages and temperatures at 15% worn contact

wire and new contact wire, and maximum power/amperage demands at FPL point of service. Inputs to the calculations shall include vehicle physical and performance characteristics~~; two hour full peak operating load cycle~~, station stops, traffic signal stops, limiting speeds, maximum accelerations, and track profiles. It will also include assumed ~~delay~~delays at traffic signals~~,~~ (a standard delay and randomized delays), and full ancillary loads of the streetcar (lights, HVAC, etc~~).~~) and OESS loads. The purpose of the study will be to ensure that low OCS voltage or high rail to earth voltage will not occur on the line under specified normal and contingency operating conditions and that the equipment ~~rating is~~ratings are adequate. For the purpose of the power simulation, the Design-Build Firm shall assume the contact wires on S Andrews ~~Ave.~~Avenue will be bonded together at each passenger station and midway between them with 500 kcmil insulated cable supported on the head span wire.

RFP Attachment G, Transit Criteria, Section 5.1.4 Substation Primary Power

Revised as follows:

MV Circuit connections will be selected to provide redundancy and maximize the reliability of the power source. A reliability study shall be performed in accordance with the recommendations of IEEE 399 to demonstrate a 99.9% reliability of the traction electrification system.

RFP Attachment G, Transit Criteria, Section 5.1.5 Substation Locations

Revised as follows:

5.1.5 ~~SUB STATION~~SUBSTATION LOCATIONS

RFP Attachment G, Transit Criteria, Section 5.1.6 Substation Equipment

Revised as follows:

The secondary (output) windings shall be delta/ wye connected for the 12-pulse, double-way rectifiers in accordance with ANSI C34.2, circuit No. 31 and IEEE 1653.2, circuit No. 31.

Fault Current Withstand: The TRU, including interconnecting buses and switchgear, shall be designed to withstand, without any damage, the short circuit current resulting from bolted short circuits applied at the DC bus. Assuming duration of the short circuit not less than the worst-case clearance of the fault condition by the protective relaying plus 0.5 sec, with the substation supplied from an AC power source with 250 MVA fault duty or higher if confirmed by FPL.

Harmonics: The following requirements shall be met concerning the harmonics on the AC and DC side of the transformer-rectifier unit.

- AC side: Voltage and Current harmonics in the transformer windings shall be factored into the design of the rectifier transformer to meet the transformer temperature limitations, voltage regulation, efficiency, power factor and other performance parameters specified herein. Harmonic loading shall be evaluated under the full range of load conditions and with the expected fault level of the AC supply system, which the Design-Build Firm shall

obtain from the utility company. A harmonic study shall be performed in accordance with the recommendations of IEEE 519 and IEEE 399 to verify that the voltage and amperage harmonics produced on the utility service connection feeder are in compliance with the limits imposed by the IEEE 519 standard and FPL. Harmonic filtering equipment shall be used, if necessary.

- DC side: The output voltage ripple, as measured by the total harmonic distortion method, shall not exceed 5 % RMS for loads ranging from 0 to 100 % of the rated load of the substation. The design of the rectifier shall include DC filtering equipment, to smooth the voltage ripple at low loading conditions.

In each TPSS the DC switchgear will consist of a ~~cathode breaker, two~~ single-pole high-speed DC feeder ~~breakers~~breaker and a manually-operated positive disconnect switch. ~~All~~The DC ~~breakers~~breaker will be of the draw out type and rated to interrupt the maximum available fault current. DC bus voltage, rectifier current and feeder currents shall be displayed on the switchgear. The feeder ~~breakers~~breaker will be equipped with bi-directional adjustable direct~~-~~acting instantaneous trip and ~~bi-directional~~ short time, long time thermal ~~and~~, rate-of-rise, and instantaneous current protection devices. ~~Feeder breakers~~The feeder breaker will also be equipped with automatic re-closing and load measuring devices. Rail-to-ground voltage relay shall be provided. The DC feeder breaker protective scheme will ensure that all breakers feeding a faulted section will be opened prior to the system being damaged. ~~The cathode breaker will utilize an electronic trip unit to detect reverse current and trip the AC breaker and the Cathode breaker.~~ The switchgear assembly will be of the indoor metal enclosed type. A means of removing the DC circuit ~~breakers~~breaker from the cubicle will be provided. Each breaker shall have three distinct positions – Connected, Test, and Disconnected which will be displayed on the breaker~~.~~, annunciator, and at OCC. Equipment will be provided to allow testing of the DC circuit breakers when they are withdrawn from their cubicle.

Special Notes on Shop Substation:

The shop substation is located within the maintenance facility; thus, no special outdoor enclosure is required. The AC feed voltage shall be 480 volt, then using a step-up rectifier transformer to power the rectifier to produce 750 VDC. The rectifier shall be 12-pulse, double-way type, designed for rectifier circuit No. 31 per IEEE 1653.2 and ANSI C34.2.

The VMSF substation shall be capable of providing hotel power to cars undergoing maintenance and capable of charging the OESS battery system (through an auxiliary power~~,~~ cable~~, and~~ connection at designated car locations).

RFP Attachment G, Transit Criteria, Section 5.1.6.1 Utility Metering

Revised as follows:

Metering equipment~~, less the energy meter~~ will be provided to meet the ~~utilities~~utility's revenue metering requirements. Provide, at a minimum, the following~~.~~ and coordinate with utility company for details.

- AC line current per phase;
- AC bus voltage per phase; and

RFP Attachment G, Transit Criteria, Section 5.1.6.2 Knox Box

Revised as follows:

This shall be housed in a Knox Box, or similar, subject to the acceptance of the Authority Having Jurisdiction~~.~~ (AHJ).

RFP Attachment G, Transit Criteria, Section 5.1.10 Substation Enclosure

Revised as follows:

A/C design will include ambient heat loads expected on a sunny day with ambient temperatures ~~of110~~of 110 degrees F.

RFP Attachment G, Transit Criteria, Section 5.1.11 Substation Foundation

Revised as follows:

The DC Disconnect Switch Lineup foundation shall comply with all applicable requirements of the substation foundation.

RFP Attachment G, Transit Criteria, Section 5.1.14.2 First Article Inspection (FAI) and Acceptance

Revised as follows:

Each DC Disconnect Switch, Transformer~~/~~ Rectifier Unit (TRU), and control/annunciation system must be tested at the factory.

RFP Attachment G, Transit Criteria, Section 5.2.2 Positive Feeders

Revised as follows:

The positive feeder system ~~is~~are the ~~cable~~cables that connects the DC feeder breaker to the interface point with the OCS.

RFP Attachment G, Transit Criteria, Section 5.2.3 Negative Feeders

Revised as follows:

The negative feeder system ~~is~~are the DC feeder ~~cable~~cables from the rails to the negative bus in the substation. All rails shall be isolated from ground except those in the VMSF building.

RFP Attachment G, Transit Criteria, Section 5.2.4 Cables

Revised as follows:

Lightning protection in the TPSS will be located~~, preferably outside the enclosure,~~ to minimize damage to adjacent equipment during a failure.

RFP Attachment G, Transit Criteria, Section 7.4. Operational Design Requirements

Revised as follows:

7. The Design-Build Firm shall coordinate with the Department to determine which ~~option~~of the two options listed below will be selected by the City and designed and installed by the Design-Build Firm for the Turnback interlocking prior to Streetcar station #4 (SE 6th Street).

FIGURE 7-1a ~~– Base –~~ BID ALT #1: Signal System Overview

RFP Attachment G, Transit Criteria, Section 7.9.3 Integrated Rail and Traffic Systems

Revised as follows:

- Streetcar requests shall be sent through the TWC system and shall include Train IDs, Destination/ Route Number and individual calls; Switch Normal, Switch Reverse, To Go, and Cancel to the Streetcar Operations Control Center and the Traffic Management Center.

RFP Attachment G, Transit Criteria, Section 7.12.4. Submerged Conduit with Cable

Revised as follows:

7.12.4 SUBMERGED ~~CABLE/~~ CONDUIT WITH CABLE

The Design-Build Firm shall design and install submerged ~~cables and~~ conduits with cable for the signal track circuits, signals to meet the CFR requirements for the installation and operation of the bascule bridge.

RFP Attachment G, Transit Criteria, Section 8.1 General

Revised as follows:

A Backup Control Facility will be located at ~~Ravenswood Bus Maintenance Facility, 5201 Ravenswood Rd~~Transportation Management Center (TMC), 2300 West Commercial Boulevard, Fort Lauderdale, FL ~~33312~~33309.

RFP Attachment G, Transit Criteria, Section 8.2 Central Computer System

Revised as follows:

The Central Computer system shall be comprised of redundant servers located at the Streetcar Operations Center and at ~~Ravenswood Bus and Maintenance Facility~~the TMC for the backup OCC.

RFP Attachment G, Transit Criteria, Section 8.5. Passenger Information System (PIS)

Revised as follows:

The display shall have minimum 3 lines of text at ~~64~~29 characters per line. ~~A custom message may occupy all 180 characters of the sign.~~

RFP Attachment G, Transit Criteria, Section 8.12.3. Functional Requirements

Revised as follows:

The OCC system shall be configured with redundant SCADA servers, located at the Streetcar Operations Center and at the ~~Ravenswood Bus and Maintenance Facility~~TMC for the backup OCC, which are fully synchronized to include live RTU data, calculations, closed loop control algorithms, historical data, alarms, reports, and database changes. Peripheral and communications equipment shall be automatically transferred between SCADA servers with no operator assistance or intervention. The backup OCC will require a full set of SCADA, PA/PIS, and CCTV servers, as well as network node and fiber distribution panel. One workstation is required at this location.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.1 General

Revised as follows:

This section specifies general track construction which consists of the mainline and yard trackwork indicated ~~on~~in the ~~plans~~contract documents including installing embedded track, special trackwork, and track appurtenances.

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.2.5.1 Shop Drawings

Revised as follows:

G. ~~Restraning~~Restraining rail flare end details.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.5.3.2 Elastomeric Grout

Revised as follows:

10. Conflicts between the manufacturer's instructions, applicator's procedure, and the Contract requirements shall be brought to the attention of the Engineer of Record (EOR) for resolution.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.5.4 Materials, Products and Installation

Revised as follows:

Elastomeric Grout:

Elastomeric grout shall be a two-component polyurethane material consisting of a resin and a suitable hardener, mixed on site per manufacturer's instructions. Elastomeric grout shall be subject to approval by the EOR and acceptance by the Department.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.8.2 Delivery, Storage, Handling and Maintenance

Revised as follows:

Stock rails, closure rails, tongue rails, and frogs shall be delivered assembled with associated fasteners attached and include encapsulation for materials required to provide electrical ~~issulation~~isolation.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.8.5.2 Switch Points

Revised as follows:

Alignment of switch points shall be as per AREMA drawings with extended length for the installation of floating heel blocks. Switch point length ~~currently is~~shall be set as per the Final Design.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 800.9.5.1 Insulated Bonded Joints

Revised as follows:

Retain most recent historical rolling load test records demonstrating adherence to these ~~Specifications~~requirements.

List of references and contact personnel of transit authorities that have qualified and accepted similar concrete guard rail ties for Contracts with similar technical ~~specifications~~requirements.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.3.4.2.3 Primer

Revised as follows:

~~Primer: Comply with Division 09 painting Sections and Division 09 Section "High-Performance Coatings.~~

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.1 Installation

Revised as follows:

Test Wells: Ground rod driven through drilled hole in bottom of handhole and manholes. Handholes are specified in ~~Division 26 Section "Underground Ducts and Raceways for Electrical Systems,"~~the contract documents and shall be at least 12 inches (300 mm) deep, with cover.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.3 Installation of Fabricated Metal Supports

Revised as follows:

Comply with installation requirements in ~~Division 05 Section "~~Metal Fabrications~~"~~ section for site-

fabricated metal supports.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.4 Concrete Bases

Revised as follows:

Use 3000-psi, 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in ~~Division 03 Section "~~Cast-in-Place Concrete~~."~~ section.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.5 Painting

Revised as follows:

Touchup: Comply with requirements in ~~Division 09~~ Painting sections for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.6.4 Label Installation

Revised as follows:

Painted Identification: Comply with requirements in ~~Division 09~~ Painting sections for surface preparation and paint application.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.3.6.5 Identification Schedule

Revised as follows:

Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

C. Coordinate identification with ~~Project Drawings~~plans, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.4.5 Fabricated Metal Equipment Support Assemblies

Revised as follows:

Materials: Comply with requirements in ~~Division 05 Section "~~Metal Fabrications~~"~~ section for steel shapes and plates.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.4.4.18 Miscellaneous Identification Products

Revised as follows:

Paint: Comply with requirements in ~~Division 09~~ Painting sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 801.5.3 Submittal Requirements

Revised as follows:

Product Data: Submit product data showing material proposed. Submit sufficient information to determine compliance with the ~~Drawings~~plans and specifications.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 802.1.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 802.1.2 Reference Documents

Revised as follows:

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 802.1.4 Submittal Requirements

Revised as follows:

Project record documents:

D. Two weeks prior to date of ~~Substantial~~ completion of the irrigation system, transfer all

information from the redlined record set of drawings to ~~AutoCAD format~~ electronic files. Prepare drawings in accord with the Departments current ~~AutoCAD~~ standards. Provide drawing plot for the Department's review and acceptance.

Controller charts:

C. Controller charts shall be prepared in ~~AutoCAD.~~electronic format. Provide hard copy plots of controller charts and ~~AutoCAD~~ electronic files on disk. Provide preliminary plot for Department acceptance prior to final submittal.

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 802.1.4.3 Warranties

Revised as follows:

~~Submit warranty documents in accordance with RFP Section _____.~~

RFP Attachment H.1. Volume 1 Track and Miscellaneous, Section 802.1.6.1 Materials

Revised as follows:

All other irrigation system components shall be in accordance with the City of Fort Lauderdale and Broward County standards and approved manufacturer.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.2 Fabrication Qualifications

Revised as follows:

Submit certification that the manufacturer, or manufacturers, of the AC switchgear, rectifier-transformers, rectifiers, ~~and~~ DC switchgear assemblies, and DC Disconnect Switch Lineup have manufactured equipment substantially equivalent to the equipment to be provided.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.3 Submittal Requirements

Revised as follows:

Submit Shop Drawings, Product Data and Samples in accordance with the requirements of these Contract Documents.

~~Submit Operations and Maintenance Manuals in accordance with the requirements of these Contract Documents.~~

Submit the following for acceptance at 90% and Final Submittals:

J. DC Disconnect Switch Lineup mechanical, structural, and electrical drawings including schematics and wiring diagrams, foundation drawings, conduit stub-up plans and details.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.3.1 Calculations

Revised as follows:

E. Source of formulae and references.
F. All inputs labeled and outputs shown.
~~F.~~G. Conclusion statement.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.6.3 AC Circuit Breaker Assembly

Revised as follows:

Provide a fixed or tray mounted single-phase, cast resin, dry-type station service transformer and locate in the same cubicle or general area as the AC circuit breaker. The transformer primary windings to have five 2.5 percent, full capacity taps, two above and two below the rated voltage.

A. Station Service transformer shall be manufactured and tested in accordance with IEEE C57.12.01, C57.12.91 and shall have ANSI/ IEEE certification.

1. Maximum allowable temperature rise under continuous full load ~~above~~at average ambient temperature of 40°C:

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.6.4 Transformer Rectifier Unit

Revised as follows:

Provide transformer-rectifier units rated not less than 500 kW at the output terminals~~.~~, unless the approved traction power system load flow study confirms that a different rating may be justified and optimal. The Design-Build Firm's Engineer of Record shall verify that the specified rating for the transformer-rectifier units are sufficient as described in the Contract Documents.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.7.1 General

Revised as follows:

Fire extinguishers to be multipurpose dry chemical, 10 A, 60 B C, 30 pound, wall mounted minimum or as required by ~~State or City regulations.~~the authority having jurisdiction.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.2.8.1 Acceptance Testing

Revised as follows:

Perform all tests in accordance to the latest edition of the International Electrical Testing Association (NETA) Acceptance Testing Specifications. Include all tests and inspections recommended by NETA Acceptance Testing Specifications.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.3.9 Galvanized and Stainless Steel Wire and Wire Rope

Revised as follows:

810.4.3.9 GALVANIZED AND STAINLESS STEEL WIRE AND WIRE ROPE

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.8.3 OCS Pole and Pier Foundation

Revised as follows:

810.4.8.3 OCS POLE AND ~~Guy Anchor~~ PIER FOUNDATION

Test the joint use pole foundation grounding system resistance to ground. The acceptable resistance at the ground plate ~~should~~shall be 25 ohms or less if practical.

Test the pole-mounted surge arrester grounding system resistance to ground. The acceptable resistance at the ground rod in the ground well ~~should~~shall be 5 ohms or less.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.8.4 Conductor Acceptance Testing

Revised as follows:

810.4.8.4 CONDUCTOR ACCEPTANCE TESTING

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.8.7.1 Pantograph Clearance Envelope

Revised as follows:

Following these tests, final tests shall be performed with an actual ~~LRV~~streetcar vehicle to verify the initial simulated results.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.8.7.2 Streetcar Vehicle Clearance Envelope and Pantograph Performance Tests

Revised as follows:

810.4.8.7.2. ~~LRV~~Streetcar Vehicle Clearance Envelope and Pantograph Performance Tests

Tests shall be performed using ~~an LRV~~a Streetcar Vehicle towed or pushed through each track section. The following tests shall be performed:

Vehicle clearance tests: The driver of the towing unit must be prepared to stop at short notice during these tests:

A. Trackside Structural Clearances to ~~LRV~~Streetcar Vehicle Body and Pantograph: This includes poles, bridges, awnings, wayside signal and electrical equipment housings.
B. ~~LRV~~Streetcar Vehicle body clearances shall be checked at:

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 810.4.8.7.3 Live Wire Tests

Revised as follows:

Following OCS electrical tests and tests detailed in B and C above, these tests shall be carried out using a powered ~~LRV~~Streetcar Vehicle for the purpose of checking the interaction of the pantograph and OCS at operating speeds. The first test shall be conducted at walking speed in each direction. The next test shall be conducted at line operating speed. During the last test, observers will be positioned at all turnouts, crossovers overhead bridges to observe the passing behavior of the pantograph and report an arcing or excessive vertical movement. At the completion of all electrical and live wire tests the Design-Build Firm shall provide and mount equipment for recording of the current collection performance tests. The video equipment will be mounted on ~~an LRV~~a Streetcar Vehicle to record the pantograph performance during a complete operating speed run on the new section of OCS.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.1.3. Reference Documents

Revised as follows:

All electrical equipment to conform to the applicable portions of the current editions of the following codes~~:~~. Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.1.4. Submittal Requirements

Revised as follows:

Refer to RFP Section V.I. Submittals for general submittal requirements. Additional submittals are listed below~~:~~ and included in RFP Attachment O.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.2.4. New River Bridge Interface Circuits

Revised as follows:

Station/ Streetcar signals, blank out signs, bridge signals and the bridge control circuits shall be interlocked to prevent:

A. ~~Trains~~Streetcar vehicles from departing the nearest Station prior to the bridge when the bridge is open or is in the process of opening;

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.2.7.1. Design Requirements

Revised as follows:

As specified in the RFP Attachment G, Transit Criteria, TWC loops shall be designed and installed

along the route so that the maximum distance between reporting loops shall not be ~~less~~greater than ~~a half (~~1~~/2) a mile in both directions~~,000 feet apart, to include installation at every signaled intersection to provide the capability to implement Predictive Transit Signal Priority.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 811.2.9.1.6 Terminals for Wires and Cables

Revised as follows:

Provide a minimum of two tools to the ~~City Contract Representative~~Department if a specialized tool is required to connect the terminal to the wire.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1. General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1.2. MVFM Requirements

Revised as follows:

Functionality needs to include at a minimum the following:

Q. Communicate over a network to send and receive data and commands with the Broward ~~County's~~County Transit back office.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1.4 MVFM Commissioning Requirements

Revised as follows:

~~Proper communication with agency Maintenance personnel during the installation process is of utmost importance. Installers shall check in with agency Maintenance Supervisors at the start of the work day and check out to report the work progress at the end of the work day. The Design-Build Firm personnel shall comply with all agency policies and procedures while on agency property.~~

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1.5. Operations and Maintenance Manuals

Revised as follows:

~~**812.1.5 Documentation**~~

812.1.5. OPERATIONS AND MAINTENANCE MANUALS

C. All manuals shall be supplied in hardcopy and electronic form. Electronic file formats shall be compatible with Microsoft® Office® ~~2007~~2016 or ~~as agency required~~later. Provided media shall not be copy protected or encrypted in any way.

G. The Design-Build Firm shall submit manuals in progressive steps as follows:

3. All copies of complete and accepted manuals (hardcopy and electronic media) in final form no less than ~~14~~30 days prior to commencement of revenue service.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1.7 Training

Revised as follows:

A training plan must be ~~provided 90 days after NTP~~submitted and approved no less than 180 days prior to scheduling training.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 812.1.8 Spare Parts

Revised as follows:

The number of spare parts must equal ~~12~~10% of the overall delivered and deployed machines.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.1 General

Revised as follows:

The purpose of ~~this Contract~~these requirements is for the Department to receive a complete

system that functions efficiently as a part of the overall ~~FDOT~~Department system and within the local community. The ~~Contract plans and specifications~~RFP set out the Mandatory Requirements that define the Department's intent. The designs of Communications, Train Control, Mechanical, Electrical, Traction Power and OCS systems are conceptual, with standard system drawings and some typical drawings provided. It is the Design-Build Firm's responsibility to complete these designs and integrate these systems into the overall Wave Streetcar project~~.~~ and selected streetcar vehicle.

Systems Integration shall ensure that individual elements fit into components, that components fit into subsystems, subsystems fit into systems, and that systems fit into the existing Traffic Signal System, Bridge Control System, and ~~FDOT~~Department operating system. The ~~FDOT~~Department operating system includes train operations and the operations of facilities such as the Operations Control Center (OCC), Vehicle Maintenance and Storage Facility (VMSF).

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.2 Systems Integration Design

Revised as follows:

The Systems Integration Design shall be provided in stages:

A. The Preliminary 30% design shall ~~be delivered 90 calendar days after NTP. The 30% design shall~~include:

B. ~~The 65% design shall be delivered 150 calendar days after NTP.~~ The 65% design shall build on the comments of the Preliminary 30% design review and shall include:

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.5 Interface Standards

Revised as follows:

The use of US standard measures shall be consistent with the current use of those standards at ~~FDOT.~~the Department.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8 Implementation

Revised as follows:

System integration will have been achieved once the Design-Build Firm demonstrates that all subsystems operate as a unit with each other and within the overall ~~FDOT~~Department system.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.2 Train Control

Revised as follows:

It is the Design-Build Firm's responsibility to complete the train control system design and to integrate this system into the Route and the existing ~~FDOT~~Department system which includes the Traffic Signal and Bridge Control systems.

The existing systems shall provide interface points at the indicated locations. ~~It is the Design-Build Firm's responsibility to request the interface points within 30 calendar days of receiving the Notice to Proceed.~~

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.3 Track Switches and Associated Apparatus

Revised as follows:

It is the Design-Build Firm's responsibility to complete the design and to integrate this system into the new Route and the existing ~~FDOT~~Department system which includes the Traffic Signal and Bridge Control systems.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.4 Traction Power and Overhead Contact System (OCS)

Revised as follows:

It is the Design-Build Firm's responsibility to complete the provided traction power and OCS system design ~~and to integrate this system into the new Route and the existing FDOT system.~~.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.5 Communications

Revised as follows:

It is the Design-Build Firm's responsibility to complete the communications system design and to integrate this system into the new Route, Traffic Signal System, Bridge Control System and the existing ~~FDOT~~Department system.

The Design-Build Firm is directed to review the Route communications systems physical, electrical electro-magnetic and software characteristics and complete any initial design presented in these Contract ~~drawings~~documents. The provided system must be sized to meet the minimum requirements set forth in ~~these specifications~~the RFP with the specified amount of spare capacity left over. The Design-Build Firm shall make a complete accounting of all communications circuits, including type of circuit and use, to be provided in the Route area and submit that listing to the Department. ~~The Design-Build Firm is required to size the communications system sufficiently to meet all the current needs with a minimum of 20% spare pairs, or circuits.~~

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.6 Mechanical, Electrical and Plumbing

Revised as follows:

It is the Design-Build Firm's responsibility to complete the provided yard, station and line mechanical electrical and plumbing systems design and to integrate these systems into the new Route and the existing ~~FDOT~~Department system.

RFP Attachment H.2. Volume 2A Systems: Traction Power Supply and Distribution, Signal and Route Control, Fare Collection, Systems Integration, Section 813.2.8.7 Conflicts and Omissions in the Contract Documents

Revised as follows:

813.2.8.7 CONFLICTS AND OMISSIONS IN THE ~~PLANS AND SPECIFICATIONS~~CONTRACT DOCUMENTS

The Design-Build Firm is required to bring conflicts and omissions in the ~~plans and specifications~~contract documents to the attention of the Department, in writing, within three working days of discovery.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.1 General

Revised as follows:

The Communications Systems also includes the Central Control Systems located at the Operation Control Center and the ~~Ravenswood Bus and Maintenance Facility~~Transportation Management Center (TMC) described in section 840.3.

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and

EE, which define additional requirements.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.1.1 Reference Documents

Revised as follows:

Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.1.2 Delivery, Storage, and Handling

Revised as follows:

Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.2.13.8 Pathways

Revised as follows:

Exceptions to the TDMM shall not be used to determine conduit bend radius, even if permitted by the NEC, for any part of this Contract unless accepted by the Department. ~~Minimum bend radius for raceways installed underground shall be as shown in Table 3.01, except where otherwise indicated.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.2.13.13 Uninterruptible Power Supplies

Revised as follows:

The Design-Build Firm shall install all UPS equipment specified in this section in accordance with the manufacturers' instructions ~~at each location Design-Build Firm~~and as specified herein

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.2.15.1.2 Inspections and Testing

Revised as follows:

~~**840.2.15.1.2 Inspections and Testing**~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.2.15.6.8 Inspections and Tests for Final Acceptance

Revised as follows:

A. At this stage ~~of the Design-Build Firm~~ all the defects and open items relevant to the Communications System and identified up to that time shall be closed prior to final inspection and acceptance test.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.2 OCC System Requirements

Revised as follows:

A Backup Control Facility will be located at ~~Ravenswood Bus and Maintenance Facility, 5201 Ravenswood Rd~~Transportation Management Center (TMC), 2300 West Commercial Boulevard, Fort Lauderdale, FL ~~33312~~33309. Therefore, a Backup OCC System is required at the ~~PF~~TMC. The redundant OCC system equipment and the redundant communication servers specified in other sections shall be installed at this location.

The OCC System equipment required for both the VMSF and ~~Ravenswood Bus and Maintenance Facility~~TMC locations are as follows:

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.2.1.5 Reliability

Revised as follows:

5. Loss of more than one OCC Workstation located within the OCC, System Manager's Office, Training Room, or Communications Room (server room) at the Vehicle Maintenance and Storage Facility (VMSF) and ~~Ravenswood Bus and Maintenance Facility;~~Transportation Management Center (TMC);

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.2.11 Electromagnetic Interference/ Electromagnetic Compatibility

Revised as follows:

EMI Sources: Principal EMI sources include the traction power system, ~~LRV~~Streetcar Vehicle propulsion subsystem, and power lines.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.2.13.1 Track Diagram Configuration Requirements

Revised as follows:

The track diagram configuration shall be the primary means of controlling and monitoring field

devices and providing ~~LRV~~Streetcar Vehicle identification and tracking.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.2.16 Security System

Revised as follows:

1. Up to 2 OCC Workstations in consoles in the OCC;

   a. One of the two OCC Workstation used for Training at the VMSF;

2. One OCC Workstation for the System Manager in the System Manager's Office at the VMSF;

~~3. One OCC Workstation used for Training at the VMSF;~~

~~4.~~3. The PAS/PIS and Video Surveillance System client workstations shall also be available at each Streetcar Dispatcher and System Manager console. Refer to associated sections for details.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.3.2.1 Submittals

Revised as follows:

Training Class Videos: Submit a video of each Training Course.

~~Operations Manuals: Prepare material for use in supporting operations for the capabilities provided at the OCC facility.~~

~~Maintenance Manuals: Submit material for use in supporting maintenance for capabilities provided at the OCC facility and station.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.3.6.3 Manuals

Revised as follows:

~~**840.3.3.6.3 Manuals**~~

~~Detailed manuals are required, at a minimum, for systems, operations, maintenance, and training. All manuals shall be prepared on a personal computer using an industry-standard desktop publishing system (e.g. Adobe Acrobat).~~

~~Manuals shall be properly indexed, and a copy of the latest revision shall be forwarded on standard 120mm CD-ROM or DVD. Commercial manuals from OEMs may be acceptable, subject in each instance to the prior written acceptance of the Department.~~

~~Copies of each manual in production version shall be developed and submitted to the Department. Information gathered at the FAT shall be used by the Design-Build Firm to develop final draft~~

~~versions of the manuals. Information gathered during subsequent series of integration and acceptance tests and during the Warranty Support Service period shall be incorporated by the Design-Build Firm into the manuals for the final submittal to the Department. The Department may elect to use and verify the manual contents during the conduct of the various testing activities.~~

~~Design and Format:~~

~~A. Manuals shall be designed for continuous, long-term service in a control center environment. Manuals shall lie flat when opened and shall permit adding and replacing pages. Covers shall be oil-, water- and wear-resistant.~~
~~B. Indexing – Contents shall be indexed by white divider pages, 60-pound minimum, with white, 0.375-inch, rounded-corner tabs. Tabs shall be Mylar® reinforced, or the equivalent, with bold, black, capital printing on both sides, and shall be in banks of five.~~
~~C. Paper – Pages, including drawings and figures, shall be on approved-grade paper and bound either in loose-leaf form with reinforced, oversized punch holes, or, if approved, in five- or seven-ring binders. Pages shall be 8.5 inches wide by 11 inches high. Pages shall be printed on both sides. Sides of pages intentionally left blank shall be so noted.~~
~~D. Figures – Figures, including diagrams, drawings and illustrations, shall be labeled as figures. If approved, figures shall be 11 inches high by 17 inches wide and folded to an 8.5 inch format with the identification displayed. Figures, including those reduced in size, shall be legible to a person with normal visual acuity.~~
~~E. Alternatives – Alternative formats may be proposed for the manuals, provided that there is a level of consistency across subsystems. Any alternative formats shall be subject to review and acceptance by the Department.~~

~~Operations Manuals – The Design-Build Firm shall provide Operations Manuals that provide the information required for the OMC to efficiently operate the OCC System. Operations Manuals shall fully describe how the user shall interact with the OCC System. Operations Manuals shall provide the following, at a minimum:~~

~~A. Provide a description of how to navigate through the various menus and displays;~~
~~B. Provide a description of all console workstation devices, including all equipment associated with the Public Address/ Customer Information System (PA/CIS), and how to use them;~~
~~C. Provide a description of all OCC System hardware including console workstations, servers, station control units (SCU), etc;~~
~~D. Provide a description of all OCC System functions and capabilities;~~
~~E. Provide operating descriptions for all graphic images, alarms and other HMI details;~~
~~F. For each electronic form, provide a graphical representation, a purpose statement form and a description of all fields and buttons;~~
~~G. Provide a description of each error message, the cause of the error message and recommended solutions;~~
~~H. Describe service instructions for servicing and adjustments permitted from various consoles;~~
~~I. Provide instructions on how to implement backup systems/reconfigure the OCC System;~~
~~J. Alternative subdivision of topics, based on previously prepared (standard) manuals;~~
~~K. Provide instructions on how to modify graphic diagrams and I/O points, and place them on-line and into production;~~

~~Maintenance Manuals - The Design-Build Firm shall provide Maintenance Manuals to the Department that includes information, as approved by the Department, to efficiently maintain the~~

~~OCC System elements and the equipment supplied under the Technical Requirements. The manuals, collectively, shall include all information, as approved by the Department, to troubleshoot and maintain the entire OCC System. Where Contract maintenance may be employed, the manuals shall be the same type that the original manufacturers service representative's use. Maintenance Manuals shall include, at a minimum, the following topics:~~

~~A. Preventive maintenance, including limits, settings and tolerances;~~
~~B. Cleaning, including frequency, methods, trade identification of recommended materials and location and description of components;~~
~~C. Corrective repair, at subsystem level, and component repair, including step-by-step procedures, techniques, adjustments, and use of diagnostic test equipment;~~
~~D. Troubleshooting, including flow sheets, tables and symptom/cause/remedy charts;~~
~~E. Replaceable parts, including generic names;~~
~~F. Systematic fault isolation procedures;~~
~~G. A full description of self diagnostics and embedded diagnostics.~~

~~Software Maintenance Manual~~

~~A. The Design-Build Firm shall develop and deliver a comprehensive Software Maintenance Manual for use by the OMC. That manual shall address the modification and maintenance of all software components. Commercial manuals may be incorporated into the Software Maintenance Manual if the documentation is acceptable to the Department and applicable to the OCC System. The organization of the manual and the contents shall be subject to review and acceptance by the Department.~~
~~B. The Software Maintenance Manual shall include all information required to enable the Department to modify and expand the OCC System software. The manual shall include diagrams that illustrate data flow, data hierarchy, data relationships, compiling instructions, debugging instructions, errors, cautions, warnings, functionality, tips, etc. The Software Maintenance Manual shall describe how to place new software and configuration files on-line. Commented source code shall also be provided.~~

~~On-line Help System, Documentation, and Manuals~~

~~A. The design of the on-line help system shall be constructed employing hypertext (e.g. hypertext markup language), cascading style sheets (CSS), and/or JavaScript or approved equivalent. Hypertext containing specific information and explanations about fields, icons, diagrams, etc. shall be linked to appropriate fields, icons, diagrams, etc. on related forms. This information shall be accessible through a menu system or through a right click on the field or area on the electronic form. Linked information includes, but is not limited to, explanations of how to enter data, what type of data to enter, description of the data to be entered, description of the field attributes and other suggested hyperlinks to provide the operator with more information.~~
~~B. The design of the on-line help system shall be user-oriented and shall be equipped with a retrieval mechanism that is intuitive and allows the OCC personnel to access appropriate portions of the on-line help system in a timely manner.~~
~~C. The user interface of the on-line help system shall simulate the functionality of a book by providing an index of on-line information and a navigation tool which allows the operator to move through topics, material and text.~~
~~D. The on-line help system shall be equipped with a menu structure that represents all manuals and documentation included in the system in which the operator may select the desired area to explore.~~

~~E. The Design-Build Firm shall provide a mechanism for entering the manuals and documentation into the on-line help system. The Design-Build Firm shall provide a mechanism for entering the Department's manuals and documentation into the on-line help system.~~

~~F. The on-line help system shall be designed to allow the Department to individually modify, add and remove on-line documentation and manuals.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.4.1.2 Manuals

Revised as follows:

~~Manuals shall be submitted during the course of the design and implementation.~~ Their purpose is to provide the Department personnel with the information required to support and maintain the OCC System.

General Documentation Requirements

A. Document Submission

1. Documentation shall be submitted in accordance with the dates specified in the Project Schedule and the Contract Data Requirements List (CDRLs) as defined in Section 840.3.3.6 OCC System ~~- Submittals~~.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.4.1.3 Drawings

Revised as follows:

General:

A. CADD: Drawings shall be CADD generated~~, using Microstation or~~ to the Department approved ~~equal~~standard. Hand-drawn sketches will not be accepted unless specifically requested and pre-approved by the Department.

D. Electronic Digital Format

2. Drawings:

a. Copies of all drawings prepared for the OCC System shall be submitted to the Department as Adobe Acrobat (PDF) files. PDF files shall be scaled to fill an 11 x 17 inch page without distorting the drawing content, layout, or quality.

~~b. Electronic digital copies of all drawings prepared for the OCC System shall be submitted to the Department as CADD files.~~

~~c. CADD files shall be created in the Microstation file format. Any variance to these criteria requires prior acceptance by the Department.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.1.1.1

Overview Display Graphics Requirements

Revised as follows:

~~Design-Build Firm shall use MIL-STD-1472G as a guideline the design of the Projection System.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.1.1.3 Console Workstation LCD Monitor Graphics Requirements

Revised as follows:

The user shall have the capability to quickly obtain the location of a selected ~~LRV.~~Streetcar Vehicle. The user shall be provided with a list of ~~LRVs~~Streetcar Vehicles arranged in sequential order, by vehicle identifier.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.1.1.4 Configuration Editor Requirements

Revised as follows:

~~1. Shape –~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.4.5 Daily Train Assignments

Revised as follows:

I. The following information shall be captured for Extra Trains:

5. ~~LRV~~Streetcar Vehicle IDs within the train's consist;

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.4.14.2 Incident Information Entry Form

Revised as follows:

D. Remaining entry fields shall require entry by the authorized user (Streetcar Dispatcher, System Manager).

4. Vehicle Numbers and whether effected (list of current ~~LRV~~Streetcar Vehicle IDs for the day).

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.4.6.1.2 Required Reports

Revised as follows:

The Report Prototypes shall be a submittal of all planned reports, prototyped and presented to the ~~Engineer of Record~~Department for ~~approval~~acceptance of both content and format.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.9 Workstations

Revised as follows:

The workstations provided under this contract shall meet, at a minimum, the following requirements:

A. Operating System:

1. Windows ~~7~~10 Professional 64-bit, or newer ~~(e.g. Windows 10).~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.10 Wall Mounted Displays

Revised as follows:

The wall mounted display provided under this contract shall meet, at a minimum, the following requirements:

A. Operating System:

1. Windows ~~7~~10 Professional 64-bit, or newer ~~(i.e. Windows 10).~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.14 Supervisory Control and Data Acquisition System

Revised as follows:

Servers and workstations shall be provided at the OCC located within the Wave Streetcar Vehicle Maintenance and Storage Facility (VMSF) and the Backup OCC located within the ~~Ravenswood Bus and Maintenance Facility~~TMC.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.5.14.1.4 Interface Requirements

Revised as follows:

The Design-Build Firm shall note the SCADA points listed below ~~and~~ are typical examples, and some points may not be present at TPSS and at Communications stations.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.6.1

General

Revised as follows:

The Design-Build Firm shall be responsible for the quality of, and compliance with the Technical Requirements for Transit Construction for all deliverables, regardless of any ~~approval~~acceptance or interim inspection or in-plant test.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.3.6.14 Change Control

Revised as follows:

D. Changes to interface specifications, control documents and plans shall require the ~~approval~~acceptance of all parties involved.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.6.3.2.1.5 Passenger Information Signs

Revised as follows:

b. The display shall have minimum 3 lines of text at ~~64~~29 characters per line. ~~A custom message may occupy all 180 characters of the sign.~~

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.8.5.3.1.1 Factory Acceptance Test and Inspection

Revised as follows:

The Design-Build Firm shall provide inspection results for acceptance by the ~~Authority approval~~Department.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.11.2 Submittal Requirements

Revised as follows:

As-Built drawings shall be submitted to the ~~Engineer~~Department within 14 days of the completion of acceptance testing of the Wi-MAX/ Wi-Fi equipment.

RFP Attachment H.3. Volume 2B Systems Communications, Section 840.11.3 Quality

Revised as follows:

D. All products specified herein shall be subject to ~~Engineer approval~~the Department's

acceptance based on the Design-Build Firm's ability to demonstrate adherence to the specified requirement and approval of the manufacturer's quality process.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Page 1 of 285

Revised as follows:

The ~~VMSF~~ Technical Requirements for Transit Construction (TRTC ~~is divided in two documents,~~) for the ~~VMSF: Building, Equipment,~~ Vehicle Maintenance and ~~Furnishings~~ Storage Facility is broken into two volumes. TRTC Volume 3A includes the requirements for building, equipment, and ~~the VMSF:~~ furnishings. TRTC Volume 3B includes mechanical, electrical and plumbing (~~MEP~~MEP's).

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.
Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.
Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.2.4.4 Quality Assurance

Revised as follows:

B. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of ~~Substantial~~ completion.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.3.2.3 Warranty

Revised as follows:

Submit a written warranty, signed by manufacturer and applicator, agreeing to repair or replace components of bentonite waterproofing system that fail in materials or workmanship within the specified warranty period of 5 years from date of ~~Substantial Completion.~~ Final Acceptance. Failures include, but are not limited to, the following:

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.3.6.4 Warranty

Revised as follows:

Materials Warranty to repair or replace defective materials for a period two (2) years from date of ~~Substantial Completion~~Final Acceptance

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.3.7.4 Warranty

Revised as follows:

Warranty Period: 20 years from date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.4.2.4 Warranty

Revised as follows:

Warranty shall be in effect for 5 years or life of installation (as standard with manufacturer) after date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.4.5.5 Warranty

Revised as follows:

Warranty Period: Five (5) years after the date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.4.9.3 Quality Assurance

Revised as follows:

Supplier: Provide hardware from a recognized hardware supplier that has in employment an Architectural Hardware Consultant (AHC) in good standing as certified by Society of Architectural Hardware Consultants Council, and who has experience in preparation of architectural hardware specifications, estimating, detailing, ordering, servicing of architectural hardware, and who is available at reasonable times during course of the Work for consultation with the ~~University, Department and Contractor~~Design-Build Firm.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.4.9.5.5 Keying

Revised as follows:

All locks and cylinders shall have temporary cores for the construction period. Removal of temporary cores and replacement with permanent cores shall be performed as a condition of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.5.7.5 Warranty

Revised as follows:

Provide manufacturer's standard warranty covering both materials and workmanship for a period of one year from date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.6.2.3.3 Features/ Performance/ Construction

Revised as follows:

Undercarriage wash shall provide an under-spray for the ~~LRV~~Streetcar Vehicle while running through pre-wetting arch.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.6.3.1 General

Revised as follows:

Cart, sanding (Ref. 860.6.3.19)
Washer, high pressure, hot water, portable, 4 GPM (Ref. 860.6.3.20)
Washer, high pressure, hot water, trailer, 7000 pounds (Ref. 860.6.3.21)
Dolly, rail, wheel (Ref. 860.6.3.22)
Sweeper, driveable, outdoor, 81 inch, diesel powered (Ref. 860.6.3.23)

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.6.3.20/ 860.6.3.21/ 860.6.3.22/ 860.6.3.23

Sections added as follows:

860.1.1.1 WASHER, HIGH PRESSURE, HOT WATER, PORTABLE, 4 GPM

WASHER, HIGH PRESSURE, HOT WATER, PORTABLE, 4 GPM, Equipment Identifier: 3714
Manufacturer make and model shall be submitted for review and acceptance.

860.1.1.1.1 Capacities/ Dimensions

The portable/ hot water/ high pressure/ washer shall include the following:
Overall dimensions:

Dimensions (inches)	Length	Width	Height
Equipment	47	31	49

Net weight: 495 pounds
Motor: 690 CC minimum
Operating pressure: 3,000 PSI
Maximum discharge capacity: 4 GPM

860.1.1.1.2 Features/ Performance/ Construction

The portable/ hot water/ high pressure/ washer shall include the following:
Burner shall be fuel oil fired, 309,000 BTU/Hr capacity, AGA listed gas controls, ring type with aspirating spuds, natural draft.
Heating coil shall be vertically fired, one inch OD, hydrostatic-pressure tested; 14,900 PSI burst rated.
Water pump shall be Triplex, ceramic plunger oil bath type with forged brass manifold rated at 3,000 PSI.
Gasoline tank shall be 10 gallons with an elevated fuel line.
Industrial-duty engine shall have overhead valves and easy-access oil drain line mounted on vibration isolators.
Frame shall be square tube steel on four 13 inch, two-ply tubes pneumatic tires with wheel brake.
Manufacturer shall supply all necessary soap system equipment including detergent injector, distribution hose, and connections for a complete and operable soap distribution system.
High pressure hose shall be 50 feet long steel-wire braid with a 24 inch guard for burst protection.
Trigger gun shall be insulated and fatigue-free with a dual-lance variable pressure wand that shall have a brass soap nozzle and quick coupler for multiple fittings.

860.1.1.1.3 Controls

Safety pressure relief valve, pressure switch, adjustable thermostat, ON/OFF electric motor switch with overload protection, unloader valve, water/ stream pressure regulating valve, detergent valve and automatic, non-contaminating float valve.

860.1.1.1.4 Finish

Weather-resistant epoxy powder paint in manufacturer's standard colors.

860.1.1.2 WASHER, HIGH PRESSURE, HOT WATER, TRAILER, 7000 POUNDS

WASHER, HIGH PRESSURE, HOT WATER, TRAILER, 7000 POUNDS, Equipment Identifier: 3725
Manufacturer make and model shall be submitted for review and acceptance.

860.1.1.2.1 Capacities/ Dimensions

The trailer/ hot water/ high pressure/ washer shall include the following:
Trailer Dimensions:

Dimensions (inches)	Length	Width	Deck Height
Equipment	186	88	16

Pressure Washer Dimensions:

Dimensions (inches)	Length	Width	Height
Equipment	45	33	52

Pressure Washer Weight: 750 pounds
Trailer Capacity: 7,000 pounds
Operating pressure: 3,000 PSI
Maximum discharge capacity: 4.5 GPM
Burner Fuel Pressure: 150 PSI
Motor: 600 CC minimum

860.1.1.2.2 Features/ Performance/ Construction

The trailer/ hot water/ high pressure/ washer shall include the following:
Utility Trailer
Dual 3,500 pound rated axles with leaf spring suspension shall be provided for a trailer capacity of 7,000 pounds. At least one axle shall be equipped with electric brakes.
High Pressure Washer
Burner: Fuel Oil fired, 385,000 BTU/Hr minimum capacity, AGA-listed gas controls, ring type with aspirating spuds, natural draft.
Heating coil: Vertically-fired; one inch OD, hydrostatic-pressure tested; 14,900 PSI burst-rated.
Water pump: Triplex water pump with positive displacement, ceramic plungers, brass manifold, and oil bath crankcase.
Fabrication: Welded tube frame shall protect the machine's components.
Polyethylene tanks shall be provided for the fuel and detergent to prevent rust and contamination.

860.1.1.2.3 Controls

Adjustable temperature controller, safety pressure relief valve, pressure switch, ON/OFF electric motor switch with overload protection, unloader, water heater switch, detergent valve and automatic, non-contaminating float valve.

860.1.1.2.4 Finish

Durable enamel in manufacturer's standard color

860.1.1.3 DOLLY, RAIL, WHEEL

DOLLY, RAIL, WHEEL, Equipment Identifier: 5882
Manufacturer make and model shall be submitted for review and acceptance.

860.1.1.3.1 Capacities/ Dimensions

The dolly/ rail/ wheel shall include the following:
Overall dimensions:
To be determined by selected vehicle
Weight: 243 pounds

Wheel Diameter Range: 26 to 28 inches and 29.7 to 39.4 inches
Capacity Range: 17.6 to 35 Tons per axle
Max Rail Speed: 15.5 MPH

860.1.1.3.2 Features/ Performance/ Construction

The dolly/ rail/ wheel shall include the following:
Final Capacity, Length, and Width shall be determined based on the car/vehicle selected.
Individual components shall be able to be assembled on-site.
The running-wheels of the auxiliary trucks shall be provided with the original wheel profile of customer's rolling stock.
Side beams shall be constructed of milled solid aluminum for less assembly parts and interfaces for a higher stability.
Unit shall be designed for track curves up to 30 meters radii.

860.1.1.3.3 Finish

Anaodized aluminum for a durable weather and corrosion resistant finish.

860.1.1.4 SWEEPER, DRIVEABLE, OUTDOOR, 81 INCH, DIESEL POWERED

SWEEPER, DRIVEABLE, OUTDOOR, 81 INCH, DIESEL POWERED, Equipment Identifier: 9891
Manufacturer make and model shall be submitted for review and acceptance.

860.1.1.4.1 Capacities/ Dimensions

The Sweeper/ Drivable/ Outdoor/ 81 Inch/ Diesel Powered shall include the following:
Overall dimensions:

Dimensions (inches)	Length	Width	Height
Equipment	141	45	78

Sweeping path
Minimum: 51 inches
Maximum (fully extended): 81 inches
Brush diameter: 29-1/2 inch
Hopper capacity: 1.3 cubic yards
Weight capacity: 1323 pounds
Dump height: 57-1/2 inches
Weight: 4,299 pounds
Sweeping motor type: Air powered
Speed
Max travel Speed: 20 MPH
Reverse Speed: 4 MPH
Max Sweeping Speed: 8 MPH
Fuel capacity: 14.5 gallons (diesel)

860.1.1.4.2 Features/ Performance/ Construction

The Sweeper/ Drivable/ Outdoor/ 81 Inch/ Diesel Powered shall include the following:
The unit shall include an operator cabin with a full view windshield to see the sweeping path.
The unit shall have pneumatic, 8-ply tires to protect against debris when cleaning.

The dust control system shall be a three stage system that consists of :
Stage One: Side entry cyclone swirl plate
Stage Two: Stainless steel filter screen
Stage Three: Twin cyclones
The operator cabin shall include the following accessories for operator comfort:
Power steering with height adjustment
Heater and heated windshield
One button sweeping system activation
Keyed locks
Pivoting glass windows and roof vent
Suction head floor window
Joystick controlled brushes
System monitoring warning lights
Glass doors
Suspension seat with seat belt
Low pressure foot pedal
Coil spring suspension system
Interior cab light
Sun visor
The following safety features shall be provided for operator, pedestrian, and equipment safety:
Overhead headlights and taillights with side indicators
Panoramic rear view mirrors
Overhead work lights
Windshield wiper
Warning light
Hydrostatic and mechanical brakes
4 wheel drive
Slow moving vehicle sign

860.1.1.4.3 Accessories

The Sweeper/ Drivable/ Outdoor/ 81 Inch/ Diesel Powered shall include the following:
Air conditioning
Rear camera with LCD monitor and night vision
Pressure washer attachment
Air suspension seat
Snow brush
Angle plow
Street washer
Suction lifting nozzle
Water recycling system

860.1.1.4.4 Finish

Durable enamel in manufacturer's standard color.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.6.9.1 General

Revised as follows:

This section defines the base requirements for office furniture and furnishings used in the project. Refer also to the furniture schedule listed in the RFP Attachment BB, VMSF Concept of Operations.

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.6.9.4.3.15 Rack, Bulk, Storage

Revised as follows:

860.6.9.4.3.15 Rack, Bulk, Storage
RACK, BULK, STORAGE, Equipment Identifier: 1455
860.6.9.4.3.15.1 Capacities/ Dimensions~~:~~

RFP Attachment H.4. Volume 3A Vehicle Maintenance and Storage Facility Building, Equipment, and Furnishings, Section 860.8.3.3 Warranty

Revised as follows:

Warranty Period: Five (5) years from date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880 VMSF MEP's

Revised as follows:

The Wave Streetcar Vehicle Maintenance and Storage Facility ~~is broken into two volumes. Volume 3A covers building, equipment,~~(VMSF) will accommodate daily and ~~furnishings. Volume 3B covers MEP's.~~ routine inspections, maintenance, on-car repairs, and interior/ exterior cleaning of the streetcars, as well as the OCC functions. The facility will also serve as a storage and component change-out location.
The facility is intended as a light maintenance facility with minor component rebuild, truck overhaul, and minor machine shop capabilities.
The Wave Streetcar project will pursue Envision Silver verification and LEED Silver certification levels, as a minimum requirement defined in Attachment H.6 Volume 4 Sustainability. Related design and specifications shall be included in the project documents.
The purpose of this document is to set forth the minimum technical requirements for the construction of the VMSF facility.
The Technical Requirements for Transit Construction (TRTC) for the Vehicle Maintenance and Storage Facility is broken into two volumes. TRTC Volume 3A includes the requirements for building, equipment, and furnishings. TRTC Volume 3B includes mechanical, electrical and plumbing (MEP's).

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.1 General

Revised as follows:

The requirements listed within the TRTC, Volumes 1 – 4, do not fully identify all of the submittals, spare parts, training and manuals required for this project. Refer to RFP Attachments O, DD, and EE, which define additional requirements.
Submit a Tracking and Inventory Management Plan (TIMP) that describes the method proposed for inventory management and on-site materials tracking during the construction of this project. The TIMP shall include provisions to ensure materials, equipment, parts, and components processed through the Design-Build Firm's receiving operations are identified, free from damage, traceable to acceptance criteria, and meet Contract requirements.
Where two or more standards or codes establish conflicting requirements affecting the minimum standards for quality or performance levels the most stringent requirement shall govern.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.2.2.6 Quality Assurance

Revised as follows:

Mockups: Provide interior lighting fixtures for room or module mockups, complete with power and control connections.

C. Approved fixtures in mockups may become part of the completed Work if undisturbed at time of ~~Substantial~~ completion.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.4.2.1.1 General

Revised as follows:

The Design-Build Firm shall warrant complete installation of the equipment, system, and software to be free from defects in materials and workmanship for a period of no less than twenty-four (24) months, starting with the date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.5.3.2 System Description

Revised as follows:

The management and storage servers are covered in separate ~~specifications~~requirements but are included in the DVMS scope of work.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.5.3.6.2 Cameras Power Supplies

Revised as follows:

CODEC Encoder Equipment: The ESS cameras provided as part of this contract shall include fixed and PTZ IP cameras which shall not require the use of encoders. Encoders shall not be

used unless specifically noted herein~~, or on the plans.~~. Existing ~~the Department~~ cameras shall require the use of encoders to integrate the cameras to the system, and the Design-Build Firm shall provide encoders as required.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.5.3.6.7 DVMS Software Requirements

Revised as follows:

~~Workstation Graphical User Interface Software~~

~~A. The Graphical User Interface (GUI) shall provide a multi-channel display area containing access to a listing of all connected cameras, Site and terminal maps and device tree, a navigator window, a control dialog display area, a toolbar, a display mode control area, a function control area, a video display controls area and other image controls area. Each area shall contain the necessary controls to operate and setup the system.~~

~~1. The Main Window shall provide the following:~~

~~a. Site and Device Tree depicting each recorder with all connected cameras, visually differentiating between PTZ and fixed cameras by either icons or camera tags.~~

~~b. A multi-screen display area that allows for screen displays of a Single camera, Quad, 3x3, 4x4, and Full screen of any of the above selected multi-screen displays. The main window shall be capable of spanning up to four (4) monitors through the use of a quad display card per workstation.~~

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.6.2.4 Field Quality Control

Revised as follows:

Maintain a repair log of equipment before ~~substantial completion~~Final Acceptance.

~~Prerequisites to substantial completion inspection~~Pre-requisites to Final Acceptance inspection shall be completed construction, testing, adjustments, repair logs and required instruction periods on specified equipment and systems.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.6.7.4 Field Quality Control

Revised as follows:

Prerequisite to ~~Substantial Completion Inspection~~Final AcceptanceInspection: Construction, starting, adjustment, testing and balancing, and instruction shall have been completed.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.6.20.2 Quality Assurance

Revised as follows:

Components of the BMS shall be supplied by one manufacturer. Basis of design is: JOHNSON CONTROLS INC. (JCI), other acceptable manufacturers are: TRANE and CARRIER.

~~Any equipment, device, system component, or part provided or installed by Design-Build Firm containing or using date processing shall be Year 2000 (Y2K) compliant. Before substantial completion, the Design-Build Firm shall provide a manufacturer's statement of Year 2000 compliance and manufacturer's and the Design-Build Firm's warranty against date-related failures, Bacnet Testing Lab (BTL) and Protocol Implementation Conformance Statement (PICS) for all applicable control devices.~~

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.6.20.6 Demonstration Testing

Revised as follows:

Training shall be scheduled at the Department's discretion within ninety (90) days of ~~substantial completion~~Final Acceptance.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.7.2.4 Field Quality Control

Revised as follows:

Maintain a repair log of equipment before ~~substantial completion~~Final Acceptance.

Prerequisites to ~~substantial completion inspection~~Final Acceptance inspection shall be completed construction, testing, adjustments, repair logs and required instruction periods on specified equipment and systems:

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.7.2.4 Field Quality Control

Revised as follows:

Tests and Inspections:

C. Infrared Scanning: ~~After Substantial Completion, but~~ Not more than 60 days ~~after~~before Final Acceptance, perform an infrared scan of each splice in cables and conductors No. 3 AWG and larger.

   1. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each splice ~~11 months after date of Substantial Completion~~.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.6.2 Operations and Maintenance

Revised as follows:

~~880.1.1.1 Operations and Maintenance~~

~~880.1.1.1.1 SOFTWARE SERVICE AGREEMENT~~

~~Technical Support: Beginning with Substantial Completion, provide software support for two years.~~
~~Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include the operating systems. Upgrade shall include new or revised licenses for use of software.~~

~~A. Provide 30-day notice to the Department to allow scheduling and access to system and to allow the Department to upgrade computer equipment if necessary.~~

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.7.2.2 Warranties

Revised as follows:

A. Warranty Period: Five years from date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.7.2.4 Field Quality Control

Revised as follows:

C. Perform the following infrared scan tests and inspections and prepare reports:
   1. Initial Infrared Scanning: ~~After Substantial Completion, but~~ Not more than 60 days ~~after~~before Final Acceptance, perform an infrared scan of each switchboard. Remove front and rear panels so joints and connections are accessible to portable scanner.
   2. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switchboard ~~11 months after date of Substantial Completion~~.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.8.1.1 Warranties

Revised as follows:

A. Warranty Period: Five years from date of ~~Substantial Completion~~Final Acceptance.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.8.3.2 Field Quality Control

Revised as follows:

C. Perform the following infrared scan tests and inspections and prepare reports:
   1. Initial Infrared Scanning: ~~After Substantial Completion, but~~ Not more than 60 days ~~after~~before Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
   2. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each panelboard ~~11 months after date of Substantial Completion~~.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.9.2 Operations and Maintenance

Revised as follows:

~~**880.1.1.2 Operation and Maintenance**~~

~~Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include quarterly exercising to check for proper starting, load transfer, and running under load. Include routine preventive maintenance as recommended by manufacturer and adjusting as required for proper operation. Provide parts and supplies same as those used in the manufacture and installation of original equipment.~~

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.9.4.2 Field Quality Control

Revised as follows:

Infrared Scanning: ~~After Substantial Completion, but~~ Not more than 60 days ~~after~~before Final Acceptance, perform an infrared scan of each power wiring termination and each bus connection. Remove all access panels so terminations and connections are accessible to portable scanner.

A. Follow-up Infrared Scanning: Perform an additional follow-up infrared ~~scan 11 months after date of Substantial Completion~~.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.10.3.2 Field Quality Control

Revised as follows:

Infrared Scanning: ~~After Substantial Completion, but~~ Not more than 60 days ~~after~~before Final Acceptance, perform an infrared scan of each switch. Remove all access panels so joints and connections are accessible to portable scanner.

A. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch ~~11 months after date of Substantial Completion~~.

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.12.2 Operations

Revised as follows:

~~880.1.1.2 Operation and Maintenance~~

880.1.1.2 OPERATIONS

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.12.2.2 Software Service Agreement

Revised as follows:

~~880.1.1.2.1 SOFTWARE SERVICE AGREEMENT~~

~~Comply with UL 864.~~
~~Technical Support: Beginning with Substantial Completion, provide software support for 5 years.~~
~~Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within 5 years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.~~

~~A. Provide 30 days' notice to the Department to allow scheduling and access to system and to allow the Department to upgrade computer equipment if necessary.{Fire/General}~~

RFP Attachment H.5., Volume 3B Vehicle Maintenance and Storage Facility Mechanical, Electrical, Plumbing and Fire-Protection, Section 880.9.12.4.2 Field Quality Control

Revised as follows:

~~Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.~~
~~Annual Test and Inspection: One year after date of Substantial Completion, test fire-alarm system complying with visual and testing inspection requirements in NFPA 72. Use forms developed for initial tests and inspections.~~

RFP Attachment L, Streetcar Regulations Plan

Revised as follows:

Updated to merge revisions from each version released on 02-13 and 03-28.

RFP Attachment M.1., Broward County Maintenace ROW Maps

Revised as follows:

New attachment

RFP Attachment Q, U.S. DOT Federal Transit Administration Contract Requirements

Revised as follows:

Updated

RFP Attachment S, Environmental Permits

Revised as follows:

New Attachment USACOE Permit No. SAJ-2016-00936 NWP
New Attachment SFWMD Bridge Permit Application
New Attachment Sovereign and Submerged Lands Easement Permit No. 06-03761-L

RFP Attachment V, Streetcar Station Stop Details

Revised as follows:

Revised sheets STA-A-2001, STA-A-3002, and STA-A-3006

RFP Attachment Z, Operations and Maintenance Plan (DRAFT)

Revised as follows:

Updated

RFP Attachment DD, Spare Parts List (DRAFT)

Revised as follows:

Updated

RFP Attachment GG, Access Management Plan

Revised as follows:

New attachment

RFP Reference Document 1.11., Inlet Capacity Analysis

Revised as follows:

New reference document

RFP Reference Document 2.5.1., Alignment CADD Files and List

Revised as follows:

Updated

RFP Reference Document 5.9.5., Test Hole Data Matrix and Summary of Verified Utilities

Revised as follows:

New reference document